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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,634	02/07/2002	Jerry Shifman	94-25b	2618

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EXAMINER

AFTERGUT, JEFF H

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 12/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,634

Applicant(s)

SHIFMAN ET AL.

Examiner

Jeff H. Aftergut

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 21-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21-25 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feit et al in view of Johnson et al and Rossetti.

Feit taught that it was known at the time the invention was made to form a hose with an inner rubber layer 1 formed via extrusion of an acrylonitrile butadiene rubber. Onto this inner layer of hose, it was taught to apply via extrusion a layer 3 of a barrier layer material which included a terpolymer derived from tetrafluoroethylene, hexafluoropropylene, and vinylidene fluoride. Based on description of the fluoropolymer described (column 3, line 49-column 4, line 5, it would appear that the barrier component was one which was elastomeric. The reference additionally suggested that one skilled in the art would have applied a cover 5 about the barrier layer wherein the cover materials included chlorinated polyethylene. The reference also suggested that within the hose assembly one skilled in the art would have incorporated a reinforcement layer 16 which was disposed upon the barrier layer and which included cord formed of rayon, nylon, polyester or aramid. The reference additionally suggested that within the rubber inner layer one skilled in the art at the time the invention was made would have incorporated a filler material which included carbon black. The reference additionally suggested that an amine curing agent would have been incorporated within the rubber layer. The reference

Art Unit: 1733

failed to make mention of the specific fluoropolymer employed by applicant as the barrier layer material.

However, it was known at the time the invention was made to provide a blend of a thermoplastic fluorocarbon polymer and an elastomeric fluorocarbon polymer wherein the blended polymer had improved properties over the use of one of the elastomer or the thermoplastic as evidenced by Johnson. Johnson suggested that the fluoroelastomer included terpolymers of vinylidene fluoride, hexafluoropropylene, and tetrafluoroethylene, see column 2, lines 42-61. The reference additionally suggested that for the thermoplastic fluoropolymer one would have chosen a blend of vinylidene fluoride and hexafluoropropylene, however terpolymers would also have been useful, column 2, lines 24-30. In the examples, the thermoplastic fluoropolymer selected included vinylidene fluoride and hexafluoropropylene under the tradename KYNAR FLEX 2800 as well as a blend of vinylidene fluoride and tetrafluoroethylene. The reference failed to make mention of the formation of a thermoplastic fluoropolymer which was a terpolymer of vinylidene fluoride hexafluoropropylene and tetrafluoroethylene. Johnson suggested that the blend would have been formed from 25-75% by weight thermoplastic fluoropolymer and from 75-25% by weight fluoroelastomer.

Rossetti suggested that KYNAR would have included tetrafluoroethylene within the blend of polymer of vinylidene fluoride and hexafluoropropylene, see column 3, lines 5-9. Clearly, the KYNAR of Johnson et al would have included tetrafluoroethylene as suggested by Rossetti. The applicant is also referred to column 1, lines 29-34 of Johnson et al. it would have been obvious to one of ordinary skill in the art at the time the invention was made that the thermoplastic material useful for the composition would have included tetrafluoroethylene as

Art Unit: 1733

such was suggested as part of the KYNAR materials utilized by Johnson et al as evidenced by Rossetti wherein such tetrafluoroethylene plastics were suggested by Johnson and wherein the blends of the thermoplastic fluoropolymers and the fluoroelastomers were desired for the improved properties as suggested by Johnson et al in the fuel hose assembly of Feit.

With regard to the various dependent claims, the reference to Feit suggested the incorporation of carbon black in the composition as well as the inclusion of a curing agent. Additionally, the reference suggested the use of the specified reinforcement made from the same materials as recited by applicant. Note also that the specific blend of polymers was suggested by Johnson et al and as evidenced by Rossetti the KYNAR would have included tetrafluoroethylene therein.

3. Claims 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 2 further taken with the applicant's admitted prior art.

While the reference to Feit suggested that one skilled in the art at the time the invention was made would have incorporated a curing agent within the rubber compound described therein, there is no evidence to suggest that one skilled in the art would have selected the specified curing (vulcanizing) agents nor is there any evidence that one would have specified the amount of vulcanizing agent added. However, those skilled in the art of hose manufacture wherein the core was formed from acrylonitrile butadiene rubber would have understood to utilize conventional vulcanizing agents for the same and such would have included those described by applicant, see specification page 10 of the specification. Additionally the applicant has admitted that those skilled in the art were well aware of the desired amount of vulcanizing agent added to the composition, see again the specification on page 10. It would have been

Art Unit: 1733


obvious to one of ordinary skill in the art at the time the invention was made to utilize the conventionally and commercially available vulcanizing agents of the known and admitted prior art of the disclosure in the hoses manufactured according to the techniques set forth above in paragraph 2.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 703-308-2069. The examiner can normally be reached on Monday-Friday 6:30-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA

December 15, 2002